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ABSTRACT

Despite the proliferation of school improvement projects and school effectiveness research during the 1980s, there have been very few methodologically rigorous, large-scale, widely published school effectiveness studies. As a result, the research base is thin and needs to be updated. This paper presents a brief history of the Louisiana School Effectiveness Study (LSES), summarizes major findings, describes models for the long-term development of effective and ineffective schools, and delineates possible new research directions. Begun in response to a 1977 legislative mandate, the LSES study involved three phases: a pilot study, a data-gathering phase involving a stratified sample of 76 elementary schools, and a more detailed analysis of eight matched pairs of schools. The study disclosed (1) significant between-student variance; (2) results generalizable to various parts of the United States; (3) the stability of outcome, process, and relational measures; (4) the importance of "readily alterable" school climate variables; (5) the significance of certain contextual variables like teacher behavior; (6) strong connections between teacher effectiveness and school effectiveness variables; (7) the significance of instructionally focused leaders; and (8) positive effects of internally initiated school improvement. Various steps that lead toward becoming either a highly effective or an ineffective school are also outlined. Four types of large-scale studies are needed: (1) correlational; (2) self-directed school improvement efforts; (3) well-controlled change studies; and (4) long-term studies on the relationship of school effectiveness and socioeconomic status. Included are 1 figure, 2 tables, and 39 references. (MLH)

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A TIME TO SUMMARIZE: SIX YEARS AND THREE PHASES OF THE LOUISIANA SCHOOL EFFECTIVENESS STUDY

A Paper Presented at the
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A TIME TO SUMMARIZE: SIX YEARS AND THREE PHASES OF THE LOUISIANA SCHOOL EFFECTIVENESS STUDY

Sam Stringfield and Charles Teddlie

The 1980's have proven to be an exciting yet curious period in the development of school effectiveness research. On the one hand, public and practitioner interest in the topic has remained extremely high throughout the decade. The number of school improvement projects undertaken, "based on the findings of school effectiveness research," is in the hundreds, if not thousands. The number of published reviews of school effectiveness research is in the dozens, if not hundreds.

Paradoxically, the '80's have seen very few methodologically rigorous, large scale, widely published school effectiveness studies. Many reviews (ex. Ralph and Fennessey, 1983; Rowan, Bossart and Dwyer, 1983; Purky and Smith, 1983; Cuban, 1983; and Good and Brophy, 1986) regard the field as possessing, at most, two large scale, reasonably high quality studies, (e.g., Brookover, et al., 1979; and Rutter, et al., 1979). The research base upon which the effective schools movement is based has been thin. It is close, in the 1980's, to becoming dated.

The Louisiana School Effectiveness Study (LSES) possessed the advantage of following the 1970's school effectiveness studies, and of occurring during the period of publication of many of the excellent criticisms of that work. We were able, as the first three phases of the study unfolded, to incorporate several suggestions made by critics, and thereby to address some of their concerns. We were also able to address concerns of our own.

The remainder of this article is divided into four sections:

1) a brief history of the Louisiana School Effectiveness Study (LSES);

2) major findings to date of the study;

3) models for the long term development of effective and ineffective schools; and

4) some thoughts on directions in which research on school effects research might proceed.

A Brief History of LSES

The LSES was begun in response to a legislative mandate associated with Louisiana's first educational accountability legislation in 1977. As Figure 1 illustrates, the study was conceptualized as a long term, thorough examination of issues related to school level achievement among Louisiana's elementary school children. Three phases of the study have been completed to date.

The pilot study (LSES-I) was conducted during the 1981-1982 school year (Teddlie, Falkowski and Falk, 1982.) In LSES-I the school climate questionnaires, derived from Brookover et al. (1979), were field tested, and minor alterations were made in the instruments and the methods of administration. The methodology of the full LSES-II was pilot tested in a separate district.

Insert Figure 1 About Here

For Phase II of LSES, a stratified random sample of 76 elementary schools were chosen from 12 districts (Bayless, 1983.) The districts represented urban, suburban, and rural areas of northern, central and southern Louisiana. All Phase II data were gathered during the winter and spring of 1983. Detailed presentations of results have been made elsewhere; Teddlie et al., 1984; Stringfield, Teddlie and Suarez, 1985; Teddlie and Stringfield, 1985; Teddlie, Stringfield and Desselle, 1985.)

Four data sets which have proved valuable were gathered directly from subjects in the study. Two of these were gathered directly from students in LSES-II. Student level achievement data was gathered using the Educational Development Series test, Level 5. The EDS is a nationally standardized, norm-referenced achievement test. Second, a student questionnaire was administered to the same third grade sample of over 5400 students. As was the case with the teacher and principal questionnaires, the student questionnaire involved a modification of the Brookover et al. (1979) instruments, together with measures of self concept and locus of control Members of the research team administered both instruments to all students, thus increasing the standardization of data gathering.

The 250 third grade teachers in the study completed their school climate, self concept and locus of control questionnaires during the hours that the research team gathered student data. The majority of principals completed their parallel questionnaires at the same time. The remainder of the 76 principal questionnaires were returned to the research team by mail. Secondary data regarding students' parents' Socio Economic Status (SES) and additional school characteristics information were gathered during separate visits to school districts.

The gathering of data from such a large, stratified random sample of schools allowed for comparisons among highly effective, typical, and ineffective schools, and for large scale factor analytic and path analytic (e.g. Scott and Teddlie, 1987) statistical examinations of the data. (For a more complete description of research methods, and copies of the full questionnaires, see Teddlie et al., 1984.)

The third phase of LSES was designed as a more detailed analysis of a smaller number of schools. It nested elements of a teacher effectiveness study within a school effectiveness design. A total of 16 schools, eight locally matched outlier pairs, were studied. The selection process involved examination of two consecutive years of state Basic Skills Test data on all third graders in 13 districts. The districts included the 12 in Phase II and one additional, large city system. Pairs were chosen through a seven step process (see Stringfield, Teddlie, and Suarez, 1985) which included schools' two year outlier status within districts (in rural areas, contiguous districts were analyzed together.)

Data gathering included all the instruments used in LSES-II, with the exception of the substitution of the research version of the 3-R's Test, Level 9 for the EDS. In addition, low inference classroom observational data were gathered using the Classroom Snapshot (CS) from the Stallings Observation System (Stallings and Kaskowitz, 1974.) High inference classroom data were gathered using a system developed for LSES-III. The categories were derived from an extensive review of research on teaching, and included the major teacher behavioral categories listed by Rosenshine (1983) among other variables. Additional high inference systems were developed for gathering school-wide on-site data. Analyses of these data bases is continuing.

Major Findings to date from LSES-I,-II,and -III

The purpose of this section is to briefly describe eight areas of conclusions drawn to date. More detailed discussions of the results of the studies can be found in the papers and articles referenced above and/or in the reference list of this article.

1) SIGNIFICANT BETWEEN-STUDENT VARIANCE AT THE SCHOOL LEVEL.

Several critics (ex. Coleman, et. al., 1966; Cohen, 1983) have argued that the amount of student level variance in achievement which is logically at the school level (as opposed to among student, and teacher level effects) is trivial. In LSES, a nested analysis of variance (students nested within teachers within schools) was undertaken to determine the percentage of school level variance explained in third grade scores on a norm referenced achievement test. The analysis indicated that 75% of the variance was indeed between students within classes. An additional 12% was between teachers within schools, and the final 13% was between schools (Stringfield and Teddlie, 1987.)

Thirteen percent of student level variance, which is above teacher level, is statistically and educationally significant. At issue is not whether there is significant variance among schools, but rather, can that variance be attributed to readily alterable variables. In the first three phases of LSES, the answer has constantly been "yes."

2) GENERALIZABILITY OF SCHOOL EFFECTIVENESS FINDINGS TO VARIOUS PARTS OF THE U.S.

No major school-effectiveness study had been conducted in the American South. That such a study was conducted in a stratified random sample of 76 schools in Louisiana, and that the results have several first-level similarities to Brookover et. al.'s (1979) Michigan results, argues for the generalizability of the findings, when analyzed carefully.

3) STABILITY OF OUTCOME, PROCESS, AND RELATIONAL MEASURES.

Several Critics (ex. Ralph and Fennessey, 1983; Rowan, Bossert and Dwyer, 1983) have argued that measured effects are not stable, and as such, any correlation between process measures and outcome measures may be a matter of serendipity, not worthy of consideration. Three potential points of instability are implicit. They are: Stability of outcome measures, stability of process measures, and the stability of the relationships between them. In LSES, data has been gathered relevant to each.

A) Stability of aggregated outcome measures. Rowan and Denk (1982) found that the percentage of schools which remained high outliers on the California Assessment Profile over three years was only slightly greater than chance. (Though rarely discussed, a similar result was found by Brophy (1972) when looking at three years of teacher level data.)

The higher the psychometric criterion for "effectiveness" is set, the greater the effect chance will play on inclusion into (and dropping out of) the "effective" school pool. That is to say that while a highly effective school should show greater than predicted achievement gain every year; any school, however exemplary, is unlikely to score in the top few percentages on an outcome measure three years in a row. A more reasonable criterion might be several conservative years above (or below) the mean of schools in a given geographic area and within a specified economic span, including one or more years well above (or below) the mean. This was the criterion used in LSES-III, and it produced a clear set of outliers.

A second, less elegant reason for "instability" in achievement test scores in some studies may well be the instability of testing practices. The conditions of testing in most public schools fall well below those considered necessary for optimal data gathering. Varying test administration conditions and procedures could be expected to produce instability in aggregated achievement test scores. Though much more could be made of this problem (see Pechman, 1985), in all phases of LSES, the research team augmented locally gathered achievement data with highly controlled experimentor administered testing.

B. Stability of process measures. Two findings from LSES argue for the stability of principals', teachers' and students' responses to school climate questionnaires. First, the questionnaires used in Phases I, II and III were virtually identical. (All were derived from Brookover, et.al., 1979.) These questionnaires produced virtually identical school level factor pattern results at each study phase.

Second, the first order principal, teacher and student factors generated in all phases, and especially in the 76 school Phase II, were very similar to the first order factors generated by Brookover, et. al., (1979). Factor patterns which are stable across time within one study, and across locations and studies, would appear to meet reasonable criteria from stability.

C. Stability of the relationships among processes and outcomes.

Finally, the test of stability of "school effects" should not be absolutely consistent aggregated scores across years, it should be scores which reflect school realities across years. This distinction is important.

If for two years a school is providing highly effective (or ineffective) instruction at one or more grades, but in year three experiences major disruptions (e.g., a new principal, high staff turn over, a new well- or mis-aligned curriculum), the proof of school effectiveness research variables would be predictable directional change in outcome measures.

In LSES-III we observed such predictable instability in individual schools processes (Stringfield and Teddlie, 1985). In studying matched outlier pairs, we observed four schools which had been negative outliers, and which were undergoing significant changes. As we

gathered process data in those schools, fall and spring, we were able to correctly predict improvement in their test scores. The four schools ceased to be negative outliers. In one year they did not become positive outliers, but they moved to near the local median performance. We found stable outcomes in stable contexts, variations in outcomes in predictable directions in unstable contexts. Such findings are available only to researchers melding psychometrics with in-school, in-classroom data gathering.

4) THE ROLE OF "READILY ALTERABLE" SCHOOL CLIMATE VARIABLES.

Several researchers have argued that the between-school variance that exists is largely a function of variables beyond the control of schools (the most frequently mentioned variable being SES.) The previous study which attempted to most directly address this issue was the Brookover et al. (1979) Michigan study. It found that many "school climate" variables were themselves correlated with SES. The extent of multicolinearity was such th 72.5% of between school achievement variance could be accounted for by "school climate" variables when climate variables were entered first into a stepwise multiple regression, and 4.1% when climate variables were entered after SES.

To eliminate concerns over multicolinearity, in LSES-II we loaded the SES and climate factors into a second-order factor analysis. The results can be seen in Table 1. Our first interest in this analysis was that several of the "School climate" variables were themselves rather highly correlated with SES. Most noteworthy of these were factors involving Teachers and Principals expectations for students' long term achievement.

Other factors loaded on non-SES, more alterable second-order factors. Most notable among these were S.O.F.-3 (largely Student perception of positive academic climate and Principals sense of school efficacy), S.O.F. -4 (family commitment to education and student sense of long term educational achievement), and S.O.F.-5 (absence of a negative school climate.)

There are two implications of this finding. The first is that many concepts which appear similar on printed questionnaires and on first order factor analyses (e.g. principal, teacher, and student educational expectation factors) appear to be educationally separate. Data from LSES-II indicate that teachers' and principals' educational expectations for their students are highly correlated with SES and, in fact, may serve as place holders for SES. Students' educational expectations, by contrast, were not correlated with their SES. In LSES-II it was STUDENT sense of current and future academic accomplishment, and STUDENT sense of academic futility which added the greatest non-SES variance to the prediction equation.

Second, when the above five second order factors were entered into a prediction equation, both individually and as more or less easily alterable groups, the more readily alterable variables (e.g. S.O.F.-3, -4, and -5) proved the better predictors of current level of achievement. That is, as Brookover has repeatedly noted, schools do make a difference. The evidence for that claim is strong.

Insert Table 1 About Here

5) CONTEXTUAL VARIABLES LEADING TO EFFECTIVENESS

Both Stallings and Kaskowski (1974) and Brophy and Evertson (1976, 1978) found differing sets of teacher behaviors to be predictive of high achievement gain in middle versus lower SES contexts. School effectiveness researchers and practitioners have occasionally behaved as though there was one best prescription for effective schooling. LSES is the largest study in the U.S. examining characteristics of effectiveness in differing contexts.

We have written on this topic elsewhere (Teddlie, et.al., 1984; Teddlie, Stringfield and Wimpelberg, 1987), and will restrict ourselves here to a few examples. In LSES II, students were asked (on a 5 point scale) the extent to which they felt teachers helped students who were having academic problems. Among middle SES schools, no trend was apparent. But students in low SES high achieving schools answered the question more affirmatively than did their peers in "typical" low SES schools. The students in typical low SES schools expressed a greater perception of teacher help than their peers in ineffective low SES schools.

The same pattern emerged when teachers were asked how often their principal helped them with academics. No significant pattern emerged in middle SES schools . But in low SES schools the most affirmative responses were from teachers in effective schools, followed by typical and then ineffective schools.

Two disturbing patterns were that teachers in highly effective low-SES schools reported the greatest lack of perceived support from their community, and in general reported feeling the least successful of any of the teacher groups. It was troubling to us that these teachers, doing an excellent job against considerable odds, reported no awareness of their accomplishments. Neither from their district offices nor their principals were they receiving clear rewards and recognition for their efforts.

Finally, principals in low-SES effective schools were the most likely to report taking personal interest, and exerting personal influence on the teacher hiring process in their school.

To date our contextual analyses have focused on one obvious variable--SES. We believe that a host of additional contextual variables await researchers (ex. innercity-suburban-rural; public, private; principal, teaching staff; building architecture-instructional design).

6) CONNECTIONS BETWEEN TEACHER- AND SCHOOL-EFFECTIVENESS VARIABLES.

Several observers (e.g., Good & Brophy, 1986, Freiberg, 1987) have noted the lack of connections between teacher-effectiveness and school-effectiveness research. Whatever the effects of schools are, logically they are generated

through teachers and curriculum. Very few children learn math at the principal's knee. Moreover, the teacher effectiveness research base is broader, and involves a greater variety of high quality correlational and experimental studies. To the extent that links between the two fields can be strongly made, the school effectiveness research base will be strengthened. Barr and Dreiben (1983) gathered data in four schools relevant to this concern, and Rutter et al. (1979) gathered data in 14 London High Schools. Both tended to indicate a teaching component (e.g. time on task, moving more quickly through the curriculum) in their work. In LSES-III we gathered extensive classroom observational data in 16 schools over a complete school year. Our data replicated and went beyond the above findings. As can be seen in Table 3, significantly more interactive instruction (Stallings, 1980) and higher percentages of student time on task, and more direct instruction (Rosenshine, 1983) were occurring in the "effective" schools. These analyses are continuing, but their existence builds a significantly stronger bridge between the two fields.

Insert Table 2 About Here

7) LEADERSHIP

Effective schools have instructionally focused leaders. This area was simultaneously simple and difficult to measure. It was simple in that principal's quantitatively measured opinions of their school's effectiveness tended to be a good predictor of students aggregated, residualized achievement. It was hard in that, beyond gross measures, teasing out the differentiating variables required considerable qualitative analysis. Extended interviews were undertaken in 12 outlying cases, and on a variety of measures differences were found only through careful qualitative analyses. A theme of this investigation has been that principals in ineffective schools tended to define their role in a limited, often passive, bureaucratic manner. Principals in highly effective schools appeared to be "cultural managers" who saw multiple goals for education and who saw the process of goal achievement as ambiguous and personalistic. They became involved in classroom processes, stayed close to children, and displayed a "bias for action" (Wimpelberg, 1986).

We visited more than one effective or improving school in which the actual instructional leader was not the principal, but a faculty member or informal leadership team. However, we are not aware of an effective school in which the principal did not at least facilitate the instructional functioning of the school.

8) INTERNALLY INITIATED SCHOOL IMPROVEMENT.

Four of the negative outlier schools in LSES-III were undergoing self-initiated school improvement efforts during the study. These changes fell along two dimensions which we labeled "technical" and "programmatic" (Stringfield, Teddlie, Desselle and Suarez, 1986.). Along the programmatic dimension lay efforts to alter the processes of the school. These fall along a continuum. At the most basic, they dealt with turning chaos into order. Efforts at this level focused on eliminating acts of violence on the school

grounds, and then on providing an orderly environment within the school during school hours.

A midpoint was concerned with efforts to increase time available for instruction. At these schools the principals and staffs were going about the common sense business of "getting their students to work hard."

At one school, and to a lesser extent at a second, a final point along this continuum was represented by efforts to make maximal, creative use of the time available. Curricula were being coordinated within and among grades. Concerted efforts were being made to get a wide variety of books in the hands of the (often quite deprived) students. Note that for efforts to succeed at this end of the continuum, the teachers must be able to assume orderliness and the availability of uninterrupted academic time.

In LSES-III, the schools attempting improvements along this dimension were accurate in their assessment of the most at need issue facing their school. They were targeting their efforts appropriately. (e.g. In none of the four cases did we see an orderly school focus on increasing orderliness, or a school in chaos trying to redefine its curriculum.)

By "technical" improvement efforts we refer to schools which defined their need to change in terms of a single outcome measure, aggregated test scores. They focused their efforts on that measure exclusively. It is possible to raise test scores without changing a school's over all curricula or instruction. If, for example, a state-wide test is administered at the third grade and not the fifth, the strongest fifth grade teacher can be re-assigned to the third grade, and her fifth grade teaching duties can be assumed by the weakest third grade teacher. Such a change will not effect over-all school effectiveness, but it may well raise scores at the point of measurement. We observed such an occurrence.

Similarly, a variety of "test taking skills" can be taught. We observed teachers instructing students for hours in the filling in of circles and the choosing among options "a" through "d". This was time taken during, for example, regular mathematics lessons, and hence was taken away from potential teaching of mathematics. This was time taken to increase math <u>scores</u>, and time taken away from the <u>learning</u> of mathematics.

These findings were in contrast to most previous studies of school change (ex. Huberman and Miles, 1984) in several respects. First, prior studies involved the use of externally developed (NDN, IV-C, or privately marketed) programs. The four improving schools we observed used external programs only marginally or, more often, not at all. In LSES-III the improvement efforts were not imposed by the local districts, but were derived from an internal, often principal lead, drive to improve. The projects were remarkably atheoretical and research-base-free: they consisted largely of common sense, usually judiciously applied. Huberman and Miles found that change bearing innovations "lived or died" by the amount and quality of technical assistance received. The LSES improving schools neither sought nor received external assistance, their changes lived or died by dent of their own creativity, will and work. The changes made were not elegant in design or implementation, yet they brought the school closer to the principal's and teachers' goals.

The Process(es) of School Change

In summarizing this research to date, we will leap ahead to one task we will complete in Phase V of LSES. Our plan calls for the development of models for effective schooling and for building effective schools. The first three phases have focused largely on the development of static models. LSES and a variety of other studies have taken long strides toward workable, contextual models of effective schools. While the models are, and will remain, incomplete, they are much advanced from 10 years ago. They nest students within classes within schools. They cross reference curricula, instruction and staff development activities. A literature is developing on the role of the central office and school board in setting an agenda and providing resources for schooling.

We at LSES are less sure about models for change. While we are impressed with the work of such excellent researchers of change as Berman and McLaughlin (1977), Fullan (1982), Hall and Griffin (1982), Rosenblum and Louis (1981), and Huberman and Miles (1984), we are concerned that virtually the entire study of change has taken place within the context of planned, often mandated programmatic shifts. As we have stated earlier, we believe that the great majority of schools become more or less effective, independent of such programs.

These naturally occurring processes, whatever they are, take years. de Caluwe, Marx and Petri (1987a, 1987b), working in the Netherlands, have proposed that ten years is not an unreasonable unit of time for discussing the meaningful institutionalization of school innovation. We Americans are not accustomed to studies of such duration. Our entire research reward system is built around the implicit notion that twelve months is amply long for any meaningful research.

LSES is six years old. Our relationships with some schools span nearly that entire time frame. In the final section of this paper we are going to reach a little beyond our quantifiable research to date, and try to describe how ordinary schools become more or less effective. We believe the processes of becoming more or less effective have some parallels, but that one is not the mirror image of the other. We believe that either process must be measured in units of several years.

First, the process of becoming a highly effective school:

Step 1)

An "instructional leader" or leadership group, ideally though not necessarily including the principal, emerges or, more often, arives. This person/group has several describable characteristics. They have a vision for what the school and its students could become. Whatever the absolute nature of the vision, it involves higher levels of learning and a more generally "humanistic" set of processes than current realities would seem to justify. Though they may not consciously know it in they beginning, they are prepared to work very long hours for years to achieve their vision. The peers of these instructional leaders have been studied in business in such works as A Passion for Excellence (Peters and Austin, 1985), and Leaders (Bennis and Nanus, 1985).

Step 2)

They (and note immediately the advantage of having a principal as instructional leader) choose new teachers and aides with great care. They tend to look for "spark" or "energy" and are often unconcerned with years of teaching experience or advanced degrees.

Step 3)

Either alone or with the aide of their staff the instructional leader(s) conduct an accurate instructional audit of the school. This audit has an implicit heirarchy. An intelligent choice of a beginning point for school improvement requires a knowledge of a school's position within the heirarchy. That process involves a set of steps that must be followed in order, and resembles the following:

a. Is the school a safe place for children and staff?

b. Is the school a healthy and orderly place?

c. Is the school achieving "the basics"?
(This is one area in which test scores may help.)
The focus here is not on drudgery, but on achieving skills that will prepare children for the world of work and for love of life long learning.

d. What is the current status of the text book series and supplemental readers (within and across grades)? The "teaching" and homework? Curriculum, and instruction? If, when thought of from the perspective of a perhaps slightly below average student, the lessons over a pattern of years don't follow logically (e.g. different teachers use different texts) then a move is begun to standardize a text series. Several principals observed that most teachers feel no great embarrassment receiving inservice instruction regarding how to best teach a newtext and curriculum; yet the same teachers will take considerable exception to someone trying to teach them the same educational principles regarding their current curriculum. It is, they observed, less threatening and probably more effective to work toward changes in instruction at the moment of changes in curriculum.

e. Is the school providing additional, enriching, stimulating activities for its students? Is the school involving the larger community in ways that are good for the students and for the community itself?

Step 4)

In areas where multiple resources are available, effective principals become increasingly active in targeting career development for some, occasionally all staff. This targeting is largely based on their frequent in-class observations.

Step 5)

The level of principal awareness of research on teacher effectiveness varied in LSES from moderate to non-existent. But all exercised the common sense notion that hard work leads to success. Regardless of

the words used to describe the desired state, all expected to see students on task when they visited classrooms.

Teachers who do not meet reasonable instructional standards are put on probation, provided assistance, then either exhibit improvement, transfer to another school/district, or are fired.

Step 6)
A uniform homework policy is often seen as the prerogative of an elementary school principal, and most effective principals develop a minimum daily homework expectation.

Step 7)
Special programs such as Chapter 1 and Special Education are thoughtfully coordinated with the regular program. Staff are aware of, and use, each other's practical specialties. Teachers are often encouraged, sometimes required, to visit each other's classes.

Wherever the instructional leader(s) see their school within the above seven step process, they are not satisfied. They want more for their students, and they are continually looking for it. Growth almost for its own sake seems to be part of the school's overall goals.

The process of becoming an ineffective school:

Like effectiveness, ineffectiveness takes time.

Step 1)
The "ideal" principal for the development of an ineffective school, while perhaps able to mouth platitudes about humanistic education, would not actually care about students or teachers. S/he became a principal in order to get out of the classroom. It is possible that this person already has been a principal at another (probably middle-SES) school. If that is the case, the situation had become sufficiently unappealing to the staff (or more likely, the parents) that the superintendent moved the principal to a different, probably smaller and probably lower-SES school. (Parents there being less likely to be involved in the school, and hence less likely to complain.)

Step 2)
The principal envisions the job responsibilities as bureaucratic. Though this person may speak at length on the quality of their teaching staff, they do not, in fact, visit the classes, and they judge teachers in terms of how little trouble emanates from their classrooms. They take little interest in curriculum. They avoid activities which have the potential to "stir up trouble." Unfortunately, that precludes instructional leadership.

Step 3)
The principal accepts whatever prospective teachers are sent to them, often not interviewing their new hires before their arrival for work. When interviewed, these principals almost universally will report having little to no voice in staff hiring. "It's all done at the central

office, and we have to accept whoever is sent to us." It was worth noting that in LSES-II and -III the greatest variance in principals' self-reported perceptions of control over hiring was not between districts but within. That is, two principals from a single district would often give significantly differing accounts of the degree of latitude the district allowed them in hiring. This was an excellent predictor of school effectiveness, especially in low-SES contexts. Principals at ineffective schools almost never fire or force the transfer of one of their staff. Questioning the effectiveness of one's staff, however accurately, would open oneself to cross-examination.

Step 4)

This is a point at which longitudinal analysis would become critical. Given that other, especially effective, principals within the district are visiting classes, are taking an active interest in curriculum and instruction, and are trying to get ineffective teachers out of their schools; and given that it is easier to get a teacher to accept a voluntary transfer than to go through the (iffy) process of firing a teacher, in all moderate to large districts, there is an annual floating of ineffective teachers from school to school. Bridges (1986) refers to this process as "pass the turkey." Highly effective principals do not accept their share of these less effective teachers, so that over time a disproportionate share of them come to work at the ineffective principal's school. Ineffective teachers tend to like "teaching" for the ineffective principal, because they are left alone in their room to do as they please. So there they stay.

Step 5)

Working with an increasingly ineffective staff proves discouraging to the more effective members of the professional staff who, over time, request transfers or drop out of education.

Step 6)

Over time, the school develops a reputation as an unpleasant place in which to work. Such a reputation can develop particularly rapidly if the building serves an economically disadvantaged neighborhood. Competent teachers within the system then actively resist transferring to the school.

Step 7)

The remaining staff develop an elaborate set of rationalizations for their behavior and for the school's performance. "Nobody could teach these kids." "With parents like these, what do you expect?" "Education didn't use to be like this." "People at the district office don't know anything about the real world of teaching here at XYZ school." "New teachers these days aren't any good." All of which serves to justify doing no meaningful instruction. The principal reinforces the above by writing "good" evaluations of all the teachers.

It is important to note that this process, particularly when occurring within a context of parents feeling alienated from the larger society, thus not being surprised to find themselves alienated from the school and not complaining to the official power structure above the school level, is self-perpetrating.

In all but highly effective school districts, the presence of such ineffective schools serves a valuable function. The central office staff are spared the effort and risks of actually dealing with incompetent teachers and principals, their unions, lawyers, and the courts.

Finally, the process of becoming and remaining ineffective is relatively "School Improvement Program" proof. In the absense of a strong, within school support system, any one-to-three year school improvement effort will eventually disappear, along with whatever benefits it may have temporarily brought.

Possible directions for additional research

There are four types of large scale studies needed today in the school effectiveness field. First, there is a need for additional correlational studies of the Brookover et al. and Teddlie et al. type. We do not doubt that considerable refinements in method, measurement, analysis, and results await sufficient funding.

The second need is for studies of self-directed school improvement efforts. It is our strong impression that this type effort is a) significantly different from, and b) much more common than externally developed school improvement packages.

The most crying need in school effectiveness research is for a several well controlled change studies. These studies should mix observations of students, teachers, and principals behaviors, with analyses of school rules, mores and cultures, staff development, curricula, and other variables and a variety of outcome measures.

Finally, there is a need for long term study of the relationship between school effectiveness and socioeconomic status. During any single year, the SES of a community remains a powerful predictor of aggregated student achievement. Yet there are indications that, over longer time spans, the ability of the schools to affect student achievement becomes a predictor of aggregated rise in the socioeconomic status of a neighborhood, city or state. In informal discussions of "school effectiveness" with city planners, geographers, real estate brokers, and school district testing department personnel, we have repeatedly been informed that the central bread winner for a middle class family determines the city and state in which the family will reside. However, these social observers consistently report that mothers choose specific houses and neighborhoods. It is the reputation of the schools, more than any other factor beyond cost, that determines the neighborhood of choice. In our increasingly mobile society, reputation is often a matter of test scores. Thus, aggregated test scores tend to create a self-fulfilling prophesy. When scores are high, the school, and hence the neighborhood, attracts affluent, well educated young couples. Studying this two way street would require a longitudinal melding of the skills of geographers and educators.

Summary

LSES is now six years old. It has proceeded along a thorough, reflective path. In this paper we have reviewed eight branches of conclusions of the study to date, and have speculated beyond the quantitative grasp of the study into the makings of effective and ineffective schools.

The clearest conclusions that can be drawn from our six years of research are that local school districts currently have many fine elementary schools, and many more which need readily available interventions. Broad based effectiveness in elementary education is as close an our long term will to work toward its achievement.

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Figure 1. Five Phases of the Louisiana School Effectiveness Study

Phase	Brief Description	Period
Phase One Pilot Study	Conceptualization of project Overall Design Initiation of project Pilot Study Field tested instruments *Phase One Report* completed	1980-82
Phase Two MACRO LEVEL STUDY (PROCESS-PRODUCT STUDY)	Selected sample of 76 schools Administered school climate questionnaires and other instruments to 74 principals, 250 teachers, 5,400 students Analyzed data *Phase Two Report* completed	1982-84
Phase Three MICRO LEVEL STUDY (CASE STUDIES)	Selected and compared nine matched pairs of schools Derive policy implications for what makes an effective school in these pairs of matched schools	1984-87
Phase Four SCHOOL IMPROVEMENT	Change 3 or 4 ineffective schools, focusing on information gained from Phase Three	? Pending Funding
Phase Five MODEL BUILDING PHASE	Utilize data gathered from Phases One to Four to develop comprehensive models of school effectiveness and improvement	1987-

Table 1

Various Rotated Second Order Factor Loadings

Data Base	First Order Factor Number	Name	Second Order Factor Number One	Second Order Factor Number Two	Second Order Factor Number Three	Second Order Factor Number Four	Second Order Factor Number Five
Student Questionnaire Analysis	S 2	Future Educational Expectations				.893	
	S 4	Teacher Push	-.389				
	S 5	Absence of a Negative Academic Environment			.389		
	S 6	Peer and Teacher Care About Grades			.816		
	S 7	Positive Locus of Control					
	S 9	Negative Self Image					.626
Teacher Questionnaire Analysis	T 1	College Expectation	.778				
	T 3	Student Academic Ability/School Success	.705				
	T 6	High School Desire and Expectation					
Principal Questionnaire Analysis	P 1	Student Academic Expectation	.709				
	P 2	School Success			.379		
	P 3	Parent Concern	.267				
	P 5	Work with Teachers to Improve Achievement		.796			
	P 8	Absence of Principal and Teachers					.901
	P 10	Parental Support				.828	
Demographical SES	DES 1	Students' Parents' SES	-.791				
	DES 2	Student and Faculty Race		.897			

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Table 2

School Level Mean Rates
of Selected Classroom Behavior Patterns

	Effective	Ineffective
from: Low Inference Classroom Snapshot		
% Time in Interactive Instruction	41.85%	34.41%
% Time Off Task	26.26%	30.97%
from: High Inference Classroom Observation System +		
Generally High Student On Task Rate	1.25	1.99 *
Clear Presentation of New Material	1.30	2.00 =
Student Practice After Presentation	1.52	2.12
Tchr. Conveys high Academic Expectations	1.25	1.80 *
Classroom Orderly but not Oppressive	1.31	1.82 =
Aggregated Classroom Process Rating	1.29	1.74 =

\+ Coding system:
1 = Characteristic is Clearly Present/Of High Quality
3 = Characteristic is Absent/Of Low Quality

* $p < .050$ one tailed Wilcoxon Signed Rankings Test
= $p < .025$ one tailed Wilcoxon Signed Rankings Test